CLAIMS

What is claimed is:

1. An adjusting apparatus for projection, comprising:

a carrier, having a central screw hole and three rounded indentations around the central screw hole;

an adjusting frame, placed on the back of the carrier, the adjusting frame comprising a plane section having a circular concave for accommodating a ball bearing and three screw holes corresponding to the rounded indentations, a base section connecting to the lower portion of the plane section and having at least one slot, and a fastening bolt for connecting the adjusting frame to the carrier;

three angle-adjusting bolts, respectively inserting through the screw holes to abut against the rounded indentations;

a holder, placed below the base section of the adjusting frame and having at least one positioning screw hole corresponding to the slot of the adjusting frame; and

at least one positioning bolt, inserting through the slot and screwing to the positioning screw hole.

2. The adjusting apparatus for projection of claim 1, wherein the plane section of the adjusting frame has an adjusting screw hole at its lower part, a retainer has a through hole and externally extending from a top of the holder, one end of a spring is blocked by the retainer and the other end of the spring inserts in an adjusting screw hole, and a shift-adjusting bolt inserts through the through hole to fix the spring to the adjusting screw holes.

3. The adjusting apparatus for projection of claim 2, further comprising an opening formed through a center of the base section of the adjusting frame, wherein the opening corresponds to the retainer.

4. The adjusting apparatus for projection of claim 1, further comprising a support plate placed on the back of the adjusting frame, wherein the support plate has a through hole with a diameter smaller than the ball bearing being, the through hole being formed through an upper portion of the support plate for receiving the fastening bolt, the upper portion of the support plate covering the circular concave and being screwed around the circular concave.

5. The adjusting apparatus for projection of claim 1, wherein the slot is formed through a top of the base section of the adjusting frame, and the positioning screw hole is formed on the top of the holder.

6. The adjusting apparatus for projection of claim 1, wherein the base section of the adjusting frame has two sides which bend downward from a central part, and the slot being formed on each side, and the holder has two side portions respectively having at least one positioning screw hole.

7. The adjusting apparatus for projection of claim 1, wherein the carrier has a recess in the front of the carrier.

8. The adjusting apparatus for projection of claim 1, further comprising a pin formed at each side of one rounded indention on the back of the carrier, and two restricting bolts mounted on the plane section of the adjusting frame to correspond to the pins so that the two springs are respectively restricted between one pin and one restricting bolt.

9. The adjusting apparatus for projection of claim 8, wherein two of the rounded indentations are spaced away from each other at an angle of about 90°, and the remaining rounded indention is placed on the opposite end of the rounded indentations.

10. The adjusting apparatus for projection of claim 1, wherein each of the angle-adjusting bolts has a round tip.

11. An adjusting apparatus for projection, comprising:

a carrier, having a central screw hole, two rounded indentations around the central screw hole, and a pin formed respectively opposite to each of the rounded indentations;

an adjusting frame, placed on the back of the carrier, the adjusting frame comprising a plane section having a circular concave for accommodating a ball bearing and two screw holes corresponding to the rounded indentations, a base section connecting to the lower portion of the plane section and having at least one slot, a fastening bolt for connecting the adjusting frame to the carrier, two restricting bolts corresponding to the pins of the carrier, and two springs placed between the restricting bolts and pins;

at least two angle-adjusting bolts, respectively inserting through the screw holes to abut against the rounded indentations;

a holder, placed below the base section of the adjusting frame and having at least one positioning screw hole corresponding to the slot of the adjusting frame; and

at least one positioning bolt, inserting through the slot and screwing to the positioning screw hole.

12. The adjusting apparatus for projection of claim 11, wherein the rounded indentations are spaced away from each other at an angle of about 90°.